

ABSTRACT

A tri-mode co-boresighted seeker including a primary collecting mirror assembly having a parabolic surface and a forwardly located dielectric secondary mirror assembly including a dielectric mirror coating which reflects infrared (IR) energy to an IR detector assembly located on a central longitudinal axis on one side of the secondary mirror while providing substantially unobstructed propagation of millimeter wave RF energy and laser energy in a joint or common signal path therethrough to means located on the other side of the secondary mirror for extracting and diverting laser energy away from the common RF-optical signal path to a laser sensor assembly while causing little or no disturbance to the RF signal as it propagates to a co-located bifurcated waveguide assembly which couples the RF energy to an RF sensor means located behind the primary mirror.